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ABSTRACT

Relevant and appropriate instruction for handicapped adolescent delinquents was the focus of a study involving 31 incarcerated handicapped Ss. Instruction was planned based on pretest performance on the Wide Range Achievement Test, the KeyMath Diagnostic Arithmetic Test and the Analytical Reading Inventory. Ss were tutored for 2 hours per week for 9 weeks. Results of post-tests revealed significant gains in reading raw scores, mathematics raw scores, and mathematics grade equivalent scores. There were no significant gains in spelling raw scores or grade equivalent scores. Results indicated a need for: (1) instruments designating what to teach; (2) research on the effects and need for diagnostic instruments that provide instructional objectives; and (3) research on the relevance and appropriateness of assessment and intervention techniques within regular classroom settings as well as special education settings. (CL)

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HANDICAPPED ADOLESCENT
DELINQUENTS: EDUCATIONAL
DIAGNOSIS AND TUTORING

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HANDICAPPED ADOLESCENT DELINQUENTS: EDUCATIONAL
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There is evidence to suggest that academic related problems are more prevalent among disruptive and delinquent adolescents. Jacobson (1974), Mauser (1974), Poremba (1975) and Silberberg and Silberberg (1971) suggested that disruptive and delinquent youth display an inordinate prevalence of reading and/or learning disabilities. Mauser (1974) stated that today's delinquent has an average discrepancy of two to four years between his achievement level and his achievement potential.

Juvenile delinquency and academic underachievement appear to have no single cause or simple cure. They are both associated with a multitude of etiological factors and a variety of treatments. It may be that causal factors are indeed so complex that a direct causal relationship may never be established. In any case, educators need to be primarily concerned with assessment, planning and implementation of developmental and remedial instruction. To support a theory of educational intervention, Polk and Schafer (1972) identified educational defects that may increase educational failure and delinquency. Educational defects included: (a) irrelevant instruction, (b) inappropriate teaching methods, (c) tracking, (d) inadequate compensatory and remedial education and (e) inferior teachers.

The present study addressed the problems associated with relevant and appropriate instruction. Could an indepth diagnostic evaluation in reading and arithmetic and subsequent

tutoring in these two areas increase academic achievement in these two subjects? At the same time, would a standardized test in the areas of reading, arithmetic and spelling indicate there had been little or no increase in spelling achievement?

Method

Subjects. Thirty-one incarcerated, handicapped adolescents from schools operated by the South Carolina Department of Youth Services were selected for the study. The subjects were not a random sample because, at the time of the study, they comprised the total special education population at the institution.

All of the subjects had been identified as handicapped under guidelines set forth by the South Carolina State Department of Education, Program for the Handicapped. Nine were identified as learning disabled, five as emotionally handicapped, five as educable mentally handicapped and twelve students were in the process of being evaluated or awaiting placement in special education classes.

All subjects were enrolled in the junior high or high school program and participating in the regular curriculum with resource room placement. None were self-contained in special education classes. All were experiencing academic difficulty. Table I summarized the mean age and mean grade placement.

Table I goes here

Procedure. All of the subjects were administered a battery of three pretests and three posttests approximately ten weeks apart. The Wide Range Achievement Test (WRAT) was selected as part of the battery because it provides a rapid and valid sample of spelling, reading and arithmetic (Jastak, 1976). Pretest and posttest means and standard deviations were computed on the raw scores as well as the grade equivalent scores. F tests were computed in order to establish significant differences between the pretest and posttest scores. Table II summarizes the mean, standard deviation and F for the WRAT pretest and posttest raw scores and grade equivalent scores.

Table II goes here

The subjects were also administered the KeyMath Diagnostic Arithmetic Test (KeyMath) and the Analytical Reading Inventory (ARI). The KeyMath is an individually administered test that identifies the subjects' strengths and weaknesses in arithmetic so that an appropriate program can be planned. Behavioral Objectives are listed for each test item. The test yields raw scores as well as grade achievement scores. Table III summarizes the mean, standard deviation and F for pretest and posttest raw scores and grade equivalent scores.

Table III goes here

The ARI is a diagnostic instrument that can be used to assess independent, instructional and frustration levels in reading comprehension and oral reading accuracy. Table IV summarizes pretest and posttest instructional levels in reading comprehension and oral reading accuracy.

Table IV goes here

Item responses from the KeyMath were used to determine individual profiles. Behavioral objectives taken from the KeyMath Manual were used to plan instruction for each subject. The ARI was used to establish instructional levels in reading. Based upon the information provided by these two instruments, the subjects were tutored for two hours per week for nine weeks by one of the institution's regular classroom teachers. Specifics included the following:

1. Prior to the beginning of instruction, the subjects were administered the WRAT and two diagnostic instruments, the KeyMath and the ARI.
2. Test results were used to develop written Individual Educational Plans (IEP).
3. The tutored group continued to follow the regular class and resource room schedule; however, they received individual tutoring for one hour, two times per week for a total of 18 sessions.

4. At the end of the instructional period all subjects were administered posttests.
5. Means, standard deviations and F tests were computed.

Results

Results from the investigation indicated that significant gains at the .05 level included a reading raw score gain, a mathematics raw score gain and a mathematics grade equivalent gain from the WRAT. The KeyMath was significant for both the raw score and the grade equivalent score. There were no significant gains in spelling raw scores or grade equivalent scores. Results from the ARI indicated that the mean pretest instructional level in silent reading comprehension was 1.5 and the mean posttest instructional level was 1.8 with a total gain score of three months. The oral reading accuracy mean pretest instructional level was 1.6 and the posttest mean instructional level was 1.7 with a total gain score of one month.

Conclusions

Research has been conducted in order to emphasize the relationship between delinquent behavior patterns and academic failure. The emphasis on the relationship may suggest a predictive as well as a causal relationship. This academic failure may emerge as learning disabilities, reading retardation, mental or educational retardation. However, the emphasis on the relationship between juvenile delinquency and academic failure is

limited in terms of improving instruction with the consequence of increased academic achievement.

Results of this short-term tutorial program in reading and arithmetic indicated that tutoring in these subjects increased achievement. There was a greater gain in arithmetic than in reading. Caution should be used in interpreting results as there was not a control group and no control of any instructional variables.

Implications

The greater gain in arithmetic achievement may be due to the fact that a diagnostic instrument (KeyMath) was used. It has behavioral objectives for remediation for each of the test items. The reading instrument used for assessment offered no behavioral objectives for planning instruction. It appears that no matter how effective a diagnostic instrument is in assessing academic behaviors, without explicit objectives for instruction, it may not be as effective for planning and implementing instruction.

Recommendations

1. There is a need for relevant, appropriate and effective instruction in spite of individual differences manifested as personality, intelligence, readiness, aptitude and socio-economic background. In the introduction to Levin and Long's book (1981), Bloom stated that "It is evident that the interaction between teachers and students in the classroom was the major factor in accounting for the cognitive learning of the students, their interest in school subjects and

school learning, and in their confidence in their own capabilities" (p.VII). If this is so, teachers must plan relevant and appropriate instruction, need instruments that provide diagnostic information as well as specific guidelines for planning instruction.

2. There appears to be a need for instruments to designate what to teach. It is recommended that teachers be given specific guidelines including how to teach, length of instruction, intensity of instruction and repetitiveness of instruction.
3. This exploratory study, with its obvious limitations, indicated that more research needs to be conducted in order to establish the effect and need for diagnostic instruments that provide instructional objectives. Behavioral objectives serve as a guide in developing an instructional program to meet the specific needs of students who are experiencing academic failure. The need for these objectives should be apparent to classroom as well as special education teachers.
4. It is recommended that research be conducted in terms of relevance and appropriateness of assessment and intervention techniques within regular classroom settings as well as within special education settings. Children certainly do not succeed or fail to learn within one and not the other environment.

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TABLE I
DEMOGRAPHIC DATA

	N	Mean Age	Mean Grade
Learning Disabled	9	14.4	8.4
Emotionally Handicapped	5	14.6	9.4
Educable Mentally Handicapped	5	15.7	10.4
Awaiting Placement	12	14.4	9.4

TABLE II
WRAT NUMERIC VARIABLES

		* M	* SD	F
WRAT reading raw score	Pretest	52.42	17.89	2.40
	Posttest	53.77	17.42	
WRAT reading grade equivalent	Pretest	4.06	3.12	1.58
	Posttest	4.19	3.05	
WRAT spelling raw score	Pretest	33.71	8.02	1.47
	Posttest	35.00	10.61	
WRAT spelling grade equivalent	Pretest	3.35	1.93	1.60
	Posttest	3.98	3.45	
WRAT arithmetic raw score	Pretest	31.74	5.29	2.31
	Posttest	32.57	5.59	
WRAT arithmetic grade equivalent	Pretest	4.25	1.23	2.42
	Posttest	4.49	1.34	

*M = Mean

SD = Standard Deviation

TABLE III
KEYMATH NUMERIC VARIABLES

		*M	*SD	F
Raw Score	Pretest	116.29	30.81	6.20
	Posttest	129.32	35.98	
Grade Equivalent	Pretest	5.27	4.93	1.82
	Posttest	5.77	5.99	

*M = Mean

SD = Standard Deviation

TABLE IV

ARI PERFORMANCE FREQUENCY

READING COMPREHENSION

ORAL READING ACCURACY

INSTRUCTIONAL LEVELS

Oral Reading	Pre- test	Post- test	Instructional Level	Pre- test	Post- test
	N	N		N	N
Below Primer	11	5	Below Primer	13	12
Primer	4	8	Primer	2	2
Level I	5	3	Level I	5	5
Level II	4	6	Level II	3	3
Level III	4	3	Level III	3	3
Level IV	0	2	Level IV	2	3
Level V	1	0	Level V	1	1
Level VI	0	1	Level VI	0	0
Level VII	1	1	Level VII	0	0
Level VIII	1	2	Level VIII	2	2
Mean =	1.5	1.8	Mean =	1.6	1.7